

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

REC'D. 29 OCT 2004

Applicant's or agent's file reference E-1720/03	FOR FURTHER ACTION WIPO See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/IT 03/00370	International filing date (day/month/year) 13.06.2003	Priority date (day/month/year) 14.06.2002
International Patent Classification (IPC) or both national classification and IPC E05B65/12		
Applicant INTIER AUTOMOTIVE CLOSURES S.P.A.		

1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.
3. This report contains indications relating to the following items:
 - I Basis of the opinion
 - II Priority
 - III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV Lack of unity of invention
 - V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI Certain documents cited
 - VII Certain defects in the international application
 - VIII Certain observations on the international application

Date of submission of the demand 09.01.2004	Date of completion of this report 02.11.2004
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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IT 03/00370

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

2, 5-13 as originally filed
1, 3, 4 received on 20.09.2004 with letter of 16.09.2004

Claims, Numbers

1, 2 received on 20.09.2004 with letter of 16.09.2004

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/AT 03/00370

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

see separate sheet

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N) Yes: Claims 1,2
No: Claims

Inventive step (IS) Yes: Claims
No: Claims 1.2

Industrial applicability (IA) Yes: Claims 1,2
No: Claims

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IT 03/00370

Re Item I

Basis of the report

The last feature of claim 1 describes that co-moulding of a seal gasket is performed in the same moulding station as the co-moulding of the shell and metal element is performed. The mentioning of moulding stations is however nowhere to be found in the original application. The only place in the original application where the order and location of the manufacturing steps is mentioned seems to be p.11, l.20 - p.12, l.3. This passage only describes that the two moulding operations are performed using the same die, and this does for example not exclude that this single dye would be moved between two moulding "stations". It is also not entirely clear (Article 6 PCT) what the term "station" in claim 1 is supposed to imply.

The present formulation of claim 1 consequently does not appear to have a basis in the original application contrary to Rule 70.2c PCT.

In the examination this feature has been interpreted as if the two moulding steps are performed using the same moulding die, i.e. the metal element is inserted into a die in which the shell is co-moulded onto the metal element. Thereafter the second co-moulding of the gasket is performed before extracting the shell/plate element from the die, in line with the description p.11, l.20 - p.12, l.3.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2.1 Reference is made to the following documents:

D1: US 5 505 506 A,
D2: EP 940 241 A.

2.2 Document D1 discloses a method for fabricating a supporting assembly for a lock of a motor vehicle, said lock including a plurality of mobile members 13,16 hinged to corresponding pins 12,15, the aforesaid supporting assembly comprising a shell 5 made of plastic material, which defines a housing for at least one part of said mobile members 13,16 of said lock, and at least one metal element 2,14, which supports at least a part of said pins (figs.1b, 1c). Furthermore, said shell 5, which is made of plastic material, is co-moulded on said metal element 2,14 (col.2, l.61-63).

2.3 The subject-matter of claim 1 differs from a method according to D1 in that a seal gasket is co-moulded on an edge of said shell and in that the co-moulding of the gasket is performed before extracting the shell from the die in which the first co-moulding of the shell/metal element took place (see Item I of this report).

2.4 The co-moulding of a gasket onto a plastic lock housing is however known e.g. from D2, §[0020]-[0021]. From these passages of D2 it is also clear that the same die 10 is used for the process of moulding the housing 1 and the co-moulding of the gasket 2 onto the housing.

2.5 Starting from a method according to D1 it would be immediately obvious for the skilled person to apply the teaching of D2, thereby adapting the die, which is used for the co-moulding of the shell onto the metallic element, in order to also allow the co-moulding of a gasket e.g. to the edge of the housing shown in figure 1 of D1. The skilled person would therefore arrive at a method according to claim 1 (interpreted as described under Item I) without inventive skills (Article 33(3) PCT).

2.6 Concerning claim 2 it is not clear what the difference between the pins 17, 18 of claim 1 and the pin 51 of claim 2 is supposed to be. According to the description, p.11, l.23-25 a pin 51 is inserted into the die "during the operation". It is not clear if this refers to the operation of co-moulding the shell or to the operation of inserting the metal element into the die.

2.7 If the term "operation" is meant to be the "shell co-moulding", then it is unclear in which way the pin 51 would be inserted into the die **during** this moulding operation. If on the other hand "operation" refers to the step of inserting the metal base into the die, then there appears to be no clear technical difference between the pin 51 and the pins 17,18. It is also not clear what the phrase "remains englobed" of claim 2 is supposed to mean.

2.8 Under the present wording of claim 2 it is assumed that the pin 51 of claim 2 is technically equivalent to the pins 17, 18 of claim 1. The subject-matter of claim 2 therefore appears to lack an inventive step. This appears furthermore to be the case, since the application does not seem to describe any clear non-obvious technical effect and/or advantages of these features.

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(96)

A SUPPORTING ASSEMBLY FOR A LOCK OF A MOTOR VEHICLE, AND
METHOD FOR FABRICATION OF SAID ASSEMBLY

TECHNICAL FIELD

5 The present invention relates to a method for fabricating,
assembly for a lock of a motor vehicle ~~and to the method~~
~~for fabricating said assembly.~~

BACKGROUND ART

As is known, a closing system for a door of a motor
10 vehicle comprises a lock mounted on the door and a lock
striker mounted in a fixed portion of the bodywork in
the proximity of the opening of the door itself (or,
more rarely, vice versa).

The lock basically comprises a closing mechanism
15 designed to couple, in a releasable way, with the lock
striker so as to obtain a relative blocking between the
lock and the lock striker itself when the door is
closed, and a lever-type actuating assembly, which can
be connected to the manual-control elements associated
20 to the door, such as, for instance, the internal and
external handles, and which is designed to interact with
the closing mechanism to control opening thereof.

The closing mechanism and the actuating assembly
are normally mounted on a supporting assembly, which is,
25 in turn, designed for being rigidly fixed to the
corresponding door of the motor vehicle.

duration of the assembly operations and the greater the deviation between the design dimensional values of the assembly to be made and the effective dimensional values of the assembly obtained, the said effective dimensional values suffering from inevitable play due to assembly between the components themselves.

DISCLOSURE OF INVENTION

a method for fabricating
The purpose of the present invention is to provide a supporting assembly for a lock of a motor vehicle, which will enable the drawbacks linked to known supporting assemblies, as specified above, to be overcome.

a method for fabricating
According to the present invention, a supporting assembly for a lock of a motor vehicle is provided, ~~said to claim 1.~~ according to claim 1, lock including a plurality of mobile members hinged to corresponding pins, the aforesaid supporting assembly comprising a shell made of plastic material, which defines a housing for at least one part of said mobile members of said lock, and at least one metal element, which supports at least a part of said pins, said supporting assembly being characterized in that said shell, which is made of plastic material, is co-moulded on said metal element.

The present invention further relates to a method for fabrication of a supporting assembly for a lock of a motor vehicle, said lock comprising a plurality of

mobile members hinged to corresponding pins, the aforesaid supporting assembly comprising a shell made of plastic material, which defines a housing for at least one part of said mobile members of said lock, and at 5 least one metal element, which supports at least a part of said pins, said method being characterized in that it comprises the step of co-moulding said shell made of plastic material on said metal element.

BRIEF DESCRIPTION OF THE DRAWINGS

10 For a better understanding of the present invention, there now follows a description of a preferred embodiment, provided purely by way of non-limiting example, and with reference to the attached drawings, in which:

15 - Figures 1 and 2 are views, from opposite sides and with parts removed for reasons of clarity, of a lock for a motor vehicle, which comprises a supporting assembly built according to ^{the method of} the present invention;

20 - Figure 3 is an exploded perspective view, at an enlarged scale, of the supporting assembly illustrated in Figure 1;

- Figure 4 is a perspective view, at an enlarged scale, of a component of the supporting assembly illustrated in Figure 1; and

25 - Figure 5 is a perspective view of a metal plate, starting from which there is made the component of

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CLAIMS

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1. A method for fabricating a supporting assembly (6) for a lock (2) of a motor vehicle, said lock (2) comprising a plurality of mobile members (15, 16, 22, 27, 28) hinged to corresponding pins (17, 18), and said supporting assembly (6) comprising a shell (7) made of plastic material, which defines a housing (10) for at least one part of said mobile members (15, 16) of said lock (2), and at least one metal element (8), which supports at least a part of said pins (17, 18); the method comprising the step of co-moulding said shell (7) made of plastic material on said metal element (8), and being characterized by comprising the further step of co-moulding a seal gasket (43) on an edge (42) of said shell (7) made of plastic material, in the same moulding station in which the step of co-moulding said shell (7) on said metal element (8) is performed.

2. A method according to Claim 1, characterized in that said lock (2) comprises an actuating assembly (5), of a mechanical type, which can be connected to manual-control elements associated to the door of the vehicle and which is designed to interact with said mobile members (15, 16) for controlling release of said mobile members (15, 16) from a lock striker (3); the method comprising the further step of inserting a pin (51) of

said actuating assembly (5) in the die in which said shell (7) is moulded, so that said pin (51) of said actuating assembly (5) remains englobed in said shell (7).